

Playground of Cooperation

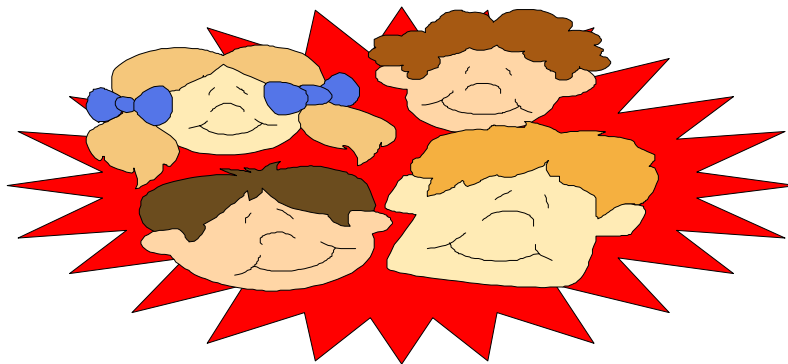
Integrated Performance Task

Grades 4-6

by

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Playground of Cooperation

Purpose: The students are required to create a piece of playground equipment that can be used by several children at one time. Prior to designing the equipment, the student will need to conduct a survey to determine what type of existing equipment are favorite types and graph the results. Students will analyze the data to design a multipurpose piece of playground equipment that contains different types of simple machines. The students are then asked to write a letter of proposal to the local park board justifying the need and design of the equipment.

Show-Me Standards Addressed:

Knowledge: S2, CA4, M6

Performance: 1.3, 3.3, 4.1

Grade Level Range: 4-6

Subject Area: Integrated (Science, Math, Communication Arts)

Materials and Resources Needed:

pictures of playground equipment, pictures of simple machines, Student Performance Task Packet (containing the Student Prompt, the Response Sheets and Scoring Guide).

Time Needed for Task: 4-5 Class Periods

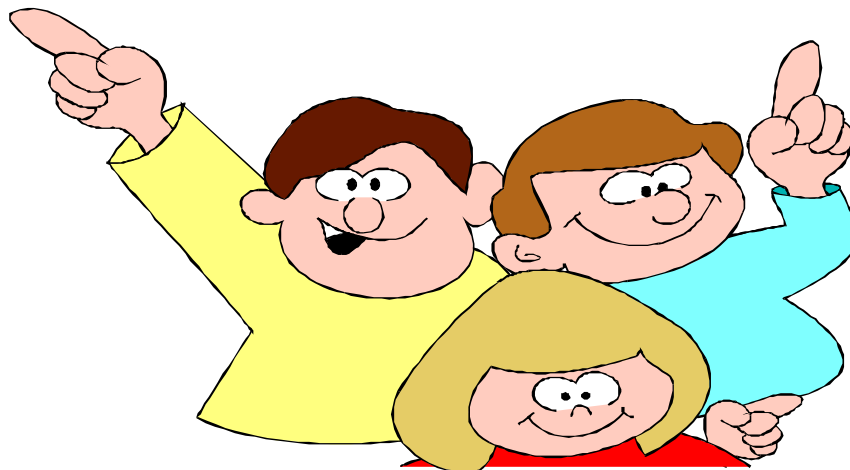
Administrator's Instructions: Look at samples of several pieces of playground equipment and samples of simple machines (i.e. lever, pulley, wheel etc.) Discuss the uses and purposes of each. Provide students with the Student Task Packet and make sure they clearly understand what is expected. Go over the scoring guide so students understand what is meant by quality.

Pre-Assessment Instructions: Students will need the prior knowledge of collecting data by using a survey and of different types of graphs and their uses.

Student Prompt

You have been assigned the job of designing a piece of playground equipment for the local park. You want to be sure it is a piece of equipment that can be used and enjoyed by several children at one time. You will need to:

- *Survey the children to find-out each one's favorite piece of playground equipment.
- * Graph the results of the survey.
- *Analyze the data and design an original piece of playground equipment that can be used at the same time by many children and that combines elements of the most popular types of playground equipment. Your creation will need to contain at least three simple machines. Be sure to label the machines.
- *Write a letter to the Parks and Recreation Department explaining the need for your "new" piece of play equipment to be placed in your local park. Be sure to give your reasoning.



Student Response Sheet #1

Survey the children to find-out each one's favorite piece of playground equipment.

Student Response Sheet #2

Create a graph that shows the results of the survey.

Student Response Sheet #3

Analyze the data and design and draw a picture of an original piece of playground equipment that combines elements of the most popular types of playground equipment. Your creation will need to contain at least three simple machines. Be sure to label the machines.

Write a letter to the Parks and Recreation department explaining the need for your “new” piece of play equipment to be placed in your local park. Be sure to give your reasoning.

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Scoring Guide

4	<p>The survey lists the favorite pieces of playground equipment of 15-20 children and correctly records the data. (1.3)</p> <p>The graph clearly and concisely reflects all the survey data. (M6)</p> <p>The design of the playground equipment is creative, is a composite of the favorite types based on the survey results. It can be used by many children at one time and has three simple machines that are correctly labeled. (S2, 3.3)</p> <p>The letter clearly communicates the need for the equipment and provides accurate concise reasoning (related to the survey results) to back the request. (CA4, 4.1)</p>
3	<p>The survey lists the favorite pieces of playground equipment of 10-14 children and may have a few insignificant errors in recording the data. (1.3)</p> <p>The graph reflects most the survey data and can be understood. Minor errors do not detract from the graph's ability to convey meaning. (M6)</p> <p>The design of the playground equipment is a composite of the favorite types based on the survey results. It can be used by many children at one time and shows at least two simple machines that are labeled. (S2, 3.3)</p> <p>The letter communicates the need for the equipment and provides reasoning (related to the survey results) to back the request. It may lose focus at one or two points or may have minor errors that are not distracting to the reader. (CA4, 4.1)</p>
2	<p>The survey lists the favorite piece of playground equipment of 5-9 children and may have major errors in recording the data. (1.3)</p> <p>The graph reflects little of the survey data and/or has significant errors that make it difficult to derive meaning from the graph. (M6)</p> <p>The design of the playground equipment may or may not be a composite of the favorite types based on the survey results. It may not be able to be used by many children at one time and/or fails to show at least two simple machines that are labeled. (S2, 3.3)</p> <p>The letter attempts to communicate the need for the equipment and may or may not provide reasoning (related to the survey results) to back the request. It may lose focus and/or contains several errors that are distracting to the reader. It is difficult to comprehend. (CA4, 4.1)</p>
1	<p>The survey lists the favorite piece of playground equipment of fewer than 5 children or shows little or no understanding in recording data. (1.3)</p> <p>The graph does not reflect the results of the survey and/or is incomprehensible due to many significant errors. (M6)</p> <p>The design of the playground equipment shows little understanding of the task. (S2, 3.3)</p> <p>The letter can not be understood or fails to address the topic. (CA4, 4.1)</p>
0	<p>Off Task No Attempt</p>